6. (Amended) The method of claim 1 wherein said administration is systemic delivery.

a3

7. (Amended) The method of claim 6 wherein said neurotrophic factor has been modified to increase its ability to be transported across the blood-retinal barrier.

13. (Amended) A method of reducing degeneration of retinal neurons in a mammal caused by exposure to light or other environmental trauma comprising administering to the mammal, prior to, during or following said exposure, a dose of one or more factors selected from the group consisting of

a4

acidic fibroblast growth factor (aFGF), bFGF plus heparin, aFGF plus heparin, interleukin-1 beta (IL-1β), and tumor necrosis factor-alpha (TNF-α), wherein said dose is effective to reduce degeneration of retinal neurons, and wherein degeneration of retinal neurons is reduced.

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15. (Amended) The method of claim 13 wherein said administration is intraocular.

17. (Amended) The method of claim 13 wherein said administration is delivered

a6

systemically.

20. (Amended) A method of reducing degeneration of retinal neurons in a mammal having a

a7

pathological condition wherein retinal degeneration occurs, comprising administering to said mammal a dose of a neurotrophic factor effective to reduce degeneration of retinal neurons, wherein degeneration of retinal neurons is reduced.

22. (Amended) The method of claim 20 wherein said neurotrophic factor is brain derived neurotrophic factor, ciliary neurotrophic factor, neuorotrophin-3 or a combination thereof.

a8

23. (Amended) The method of claim 20 wherein said retinal neurons are photoreceptors.

24. (Amended) The method of claim 20 wherein said administration is intraocular.

a9

26. (Amended) The method of claim 20 wherein said administration is by systemic delivery.

29. (Amended) A method of reducing degeneration of retinal neurons in a mammal having a pathological condition wherein retinal degeneration occurs, comprising administering to said mammal a dose of one or more factors selected from the group consisting of acidic fibroblast growth factor (aFGF), bFGF plus heparin, aFGF plus heparin, IL-1β, TNF-α and IGF-2, wherein said dose is effective to reduce degeneration of retinal neurons in the mammal, and wherein degeneration of retinal neurons is reduced.

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a11 31. (Amended) The method of claim 29 wherein said administration is intraocular.

a12 33. (Amended) The method of claim 29 wherein said administration is systemic delivery.

39. (New) The method of claim 1, wherein neurotrophic factor is selected from the group consisting of brain derived neurotrophic factor, ciliary neurotrophic factor, neurotrophin-3, acidic fibroblast growth factor, basic fibroblast growth factor, interleukin-1β, tumor necrosis factor-α, and insulin-like growth factor-2.

40. (New) The method of claim 1, wherein said neurotrophic factor is ciliary neurotrophic factor, or an active fragment thereof.

a13

41. (New) A method of reducing degeneration of retinal neurons in a mammal caused by exposure to light to other environmental trauma comprising administering intraocularly or systemically to the mammal, prior to, during or following such exposure, a dose of a neurotrophic factor effective to reduce retinal degeneration, wherein degeneration of retinal neurons is reduced --